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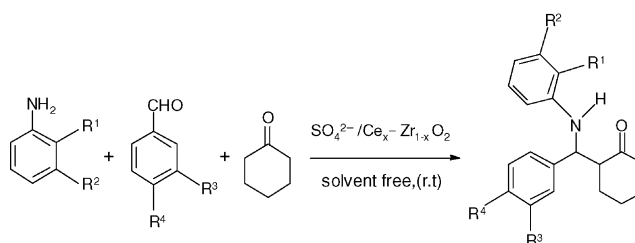
Articles

**Benjaram M. Reddy, Pavani M. Sreekanth,
Pandian Lakshmanan, Ataullah Khan**

*Journal of Molecular Catalysis A: Chemical 244
(2006) 1*

Synthesis, characterization and activity study of
 $\text{SO}_4^{2-}/\text{Ce}_x\text{Zr}_{1-x}\text{O}_2$ solid superacid catalyst

Sulfated $\text{Ce}_x\text{Zr}_{1-x}\text{O}_2$ catalyst was found to exhibit solid super-acidity and good catalytic activity for synthesis of β -amino ketones by a three-component Mannich type reaction in the liquid phase under solvent free conditions at ambient temperature.

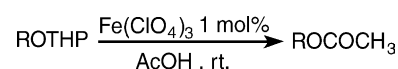


**Majid M. Heravi, Farahnaz K. Behbahani,
Rahim Hekmat Shoar, Hossien A. Oskooie**

*Journal of Molecular Catalysis A: Chemical 244
(2006) 8*

Ferric perchlorate: A novel and highly efficient
catalyst for direct acetylation of THP ethers with
acetic acid

A mild, efficient and solvent less method for direct
acetylation of THP ethers into corresponding acetates
with acetic acid, catalyzed by ferric perchlorate is
described.

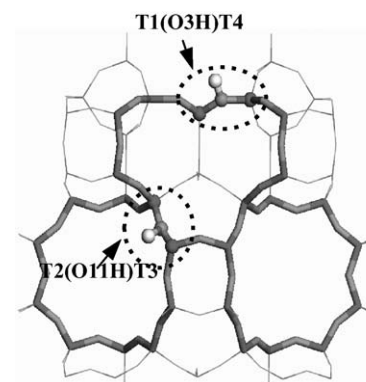


**Danhong Zhou, Ying Bao, Mingmei Yang,
Ning He, Gang Yang**

*Journal of Molecular Catalysis A: Chemical 244
(2006) 11*

DFT studies on the location and acid strength of
Brönsted acid sites in MCM-22 zeolite

DFT calculations at B3LYP/6-31G** level were
carried out for studying the location and the acidity
of Brönsted acid sites in MCM-22 zeolite. The most
favorable sites for aluminum substitution were
found at T1, T3, and T4 sites. Three preferable
Brönsted acid sites were confirmed. The acidity of
Al1(O3H)Si4 and Al4(O3H)Si1 sites are equivalent
and stronger than Al3(O11H)Si2.

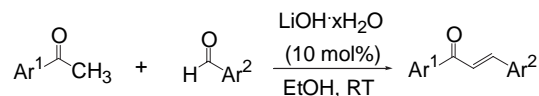


**Srikant Bhagat, Ratnesh Sharma,
Devesh M. Sawant, Lalima Sharma,
Asit K. Chakraborti**

Journal of Molecular Catalysis A: Chemical 244 (2006) 20

LiOH·H₂O as a novel dual activation catalyst for highly efficient and easy synthesis of 1,3-diaryl-2-propenones by Claisen–Schmidt condensation under mild conditions

Commercially available LiOH·H₂O efficiently catalyses the Claisen–Schmidt condensation of various aryl methyl ketones with different aryl/heteroaryl aldehydes for synthesis of 1,3-diaryl-2-propenones in high yields at room temperature in short times.

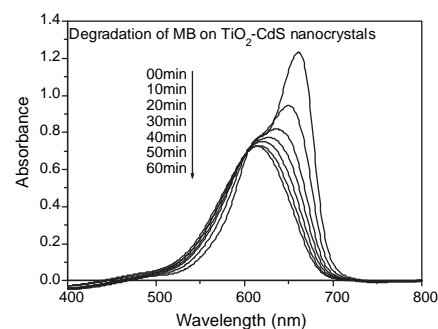


Ling Wu, Jimmy C. Yu, Xianzhi Fu

Journal of Molecular Catalysis A: Chemical 244 (2006) 25

Characterization and photocatalytic mechanism of nanosized CdS coupled TiO₂ nanocrystals under visible light irradiation

Nanosized CdS coupled TiO₂ nanocrystals were prepared and characterized. The coupling between the (1 0 1) crystal planes of anatase and (1 1 1) crystal planes of CdS was observed in the HRTEM image. An effective transfer of photo-generated electrons from the conduction band of CdS to that of TiO₂ was confirmed by the EPR spectrum. The mechanism of photocatalysis on CdS coupled TiO₂ nanocrystals under visible light was discussed.

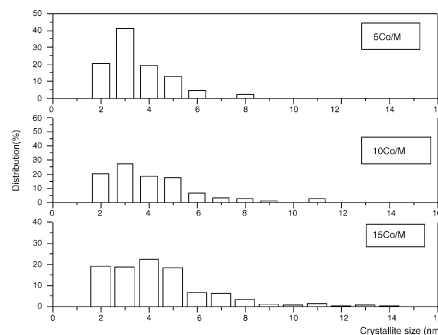


**Hualan Li, Shuguo Wang, Fengxiang Ling,
Jinlin Li**

Journal of Molecular Catalysis A: Chemical 244 (2006) 33

Studies on MCM-48 supported cobalt catalyst for Fischer–Tropsch synthesis

MCM-48 molecule sieve was used as a support of cobalt catalyst for Fischer–Tropsch synthesis (FTS). Co/MCM-48 catalysts were prepared with cobalt loadings of 5, 10 and 15 wt.%, respectively, and catalytic properties for FTS were tested. The figure shows the cobalt crystallite size distributions for the catalysts obtained by TEM method. The Co₃O₄ crystallites size of 5Co/MCM-48, 10Co/MCM-48 and 15Co/MCM-48 below 5 nm is about 92, 83 and 79%, respectively. Small Co crystallites below 5 nm appear to reoxidize and deactivate rapidly in presence of water and other reaction products. The reducibility of the Co crystallites on the catalysts determined their FTS activity and hydrocarbon selectivity.

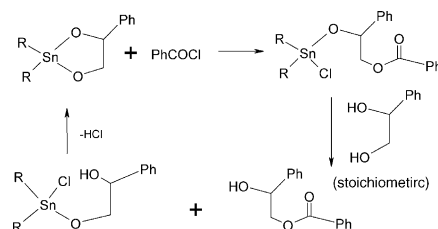


**Ezio Fasoli, Antonio Caligiuri, Stefano Servi,
Davide Tessaro**

Journal of Molecular Catalysis A: Chemical 244 (2006) 41

Diol-tin ketal as effective catalyst in the tin mediated benzoylation of polyols

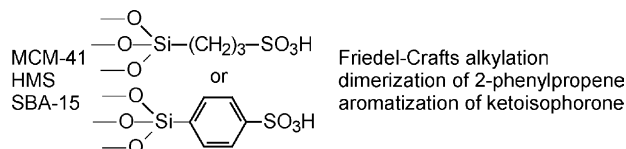
The monobenzoylation of 1-phenyl-1,2-ethanediol in the presence of different tin reagents has been studied. When 1-phenyl-1,2-ethanediol is reacted with a tin oxide or a tin ketal, the corresponding tin ketal is formed. This proved to be the actual catalyst in the benzoylation reaction.



**B. Rác, Á. Molnár, P. Forgo, M. Mohai,
I. Bertóti**

Journal of Molecular Catalysis A: Chemical 244
(2006) 46

A comparative study of solid sulfonic acid catalysts based on various ordered mesoporous silica materials

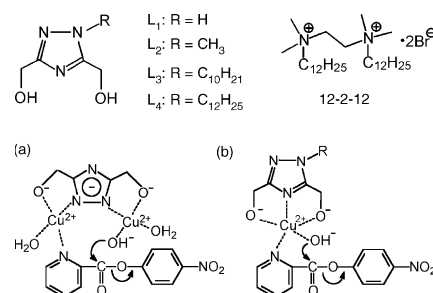


Ling-Guang Qiu, An-Jian Xie, Yu-Hua Shen

Journal of Molecular Catalysis A: Chemical 244
(2006) 58

Metallomicellar catalysis: Hydrolysis of *p*-nitrophenyl picolinate catalyzed by Cu(II) complexes of triazole-based ligands in cationic gemini surfactant micelles

Binuclear Cu(II) complex was found to be active species in micellar solution of a cationic gemini surfactant 12-2-12 for catalyzed hydrolysis of PNPP for **L**₁ (a), while mononuclear complexes were found for **L**₂–**L**₄ (b) due to different structures of the ligands.

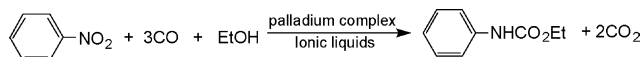


**Feng Shi, Yude He, Dongmei Li, Yubo Ma,
Qinghua Zhang, Youquan Deng**

Journal of Molecular Catalysis A: Chemical 244
(2006) 64

Developing effective catalyst system for reductive carbonylation of nitrobenzene based on the diversity of ionic liquids

The reductive carbonylation of nitrobenzene could be effectively proceeded in the presence of palladium complex and acid-functionalized ionic liquids.

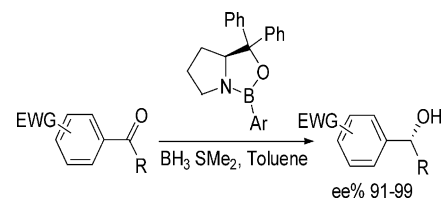


Han Liu, J.X. Xu

Journal of Molecular Catalysis A: Chemical 244
(2006) 68

(*S*)-2-Aryl-4,4-diphenyl-3,1,2-oxazaboro[3.3.0]octanes: Efficient catalysts for the asymmetric borane reduction of electron-deficient ketones

B-aryl-substituted oxazaborolidines were tuned rationally to improve the enantioselectivities of the electron-deficient ketones in the reduction. The results indicate that all B-aryloxazaborolidines show excellent enantioselectivities for the electron-deficient ketones.

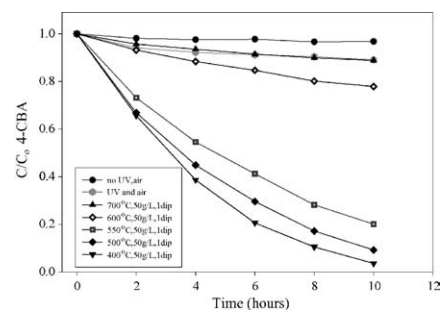


Yongjun Chen, Dionysios D. Dionysiou

Journal of Molecular Catalysis A: Chemical 244 (2006) 73

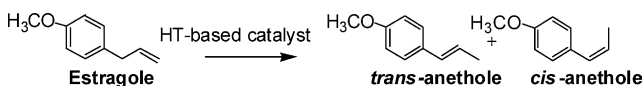
Effect of calcination temperature on the photocatalytic activity and adhesion of TiO₂ films prepared by the P-25 powder-modified sol-gel method

The effect of calcination temperature on structure, adhesion and photocatalytic activity of immobilized TiO₂ films (PPMSGFs-50) prepared by the P-25 powder-modified sol-gel method are investigated in detail. The optimum calcination temperature was found to be 500 °C, which results in enhanced photocatalytic activity, good adhesion to the support and decrease in the surface concentration of foreign metal ions (i.e. Cr³⁺). Photocatalytic degradation of 4-CBA contaminant in water is shown in the figure below. Conditions of the photocatalytic experiments: UV 300–400 nm (peak at 365 nm), air flow 2 L/min, pH 3.0, Co (4-CBA) 48 mg/L.

**Dasari Kishore, Srinivasan Kannan**

Journal of Molecular Catalysis A: Chemical 244 (2006) 83

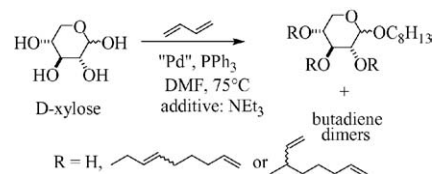
Catalytic isomerization of estragole to anethole over hydrothermalcites and HT-like compounds


**Céline Damez, Boris Estrine,
Alla Bessmertnykh, Sandrine Bouquillon,
Françoise Hélin, Jacques Muzart**

Journal of Molecular Catalysis A: Chemical 244 (2006) 93

Effects of the reactants concentration in the butadiene telomerization with D-xylose and parallel influence of triethylamine as additive

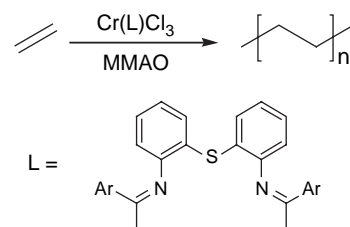
Better conversions and selectivities with NEt₃ at low xylose concentrations. No more influence of NEt₃ at high xylose and butadiene concentrations.


**Jing-Yu Liu, Yue-Sheng Li, Jing-Yao Liu,
Ze-Sheng Li**

Journal of Molecular Catalysis A: Chemical 244 (2006) 99

Syntheses of chromium(III) complexes with Schiff-base ligands and their catalytic behaviors for ethylene polymerization

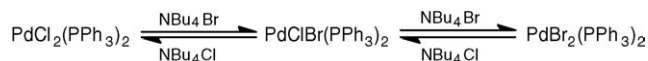
A series of novel chromium complexes bearing chelating 2,2'-iminodiphenylsulfide ligands has been synthesized, characterized, and investigated as precatalysts for the polymerization of ethylene in the presence of modified methylaluminoxane.



Attila Balázs, Csilla Benedek, Szilárd Törös

Journal of Molecular Catalysis A: Chemical 244 (2006) 105

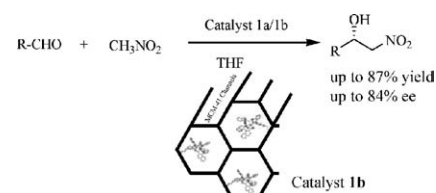
Application of molten salts in hydroalkoxycarbonylation of styrene

**Achyut P. Bhatt, Kavita Pathak, Raksh V. Jasra, Rukhsana I. Kureshy, Noor-ul H. Khan, Sayed H.R. Abdi**

Journal of Molecular Catalysis A: Chemical 244 (2006) 110

Chiral lanthanum–lithium–binaphthol complex covalently bonded to silica and MCM-41 for enantioselective nitroaldol (Henry) reaction

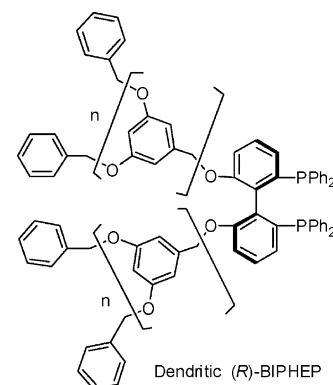
Chiral BINOL ligand based lanthanum complex supported on Silica and MCM-41 were investigated for enantioselective Henry reaction which gave yield up to 87% of β -hydroxy-nitroalkanes with ee, as high as 84% and the system could be recycled several times without much loss in its performance.

**Guo-Jun Deng, Guo-Rui Li, Ling-Yun Zhu, Hai-Feng Zhou, Yan-Mei He, Qing-Hua Fan, Zhi-Gang Shuai**

Journal of Molecular Catalysis A: Chemical 244 (2006) 118

Dendritic BIPHEP: Synthesis and application in asymmetric hydrogenation of β -ketoesters

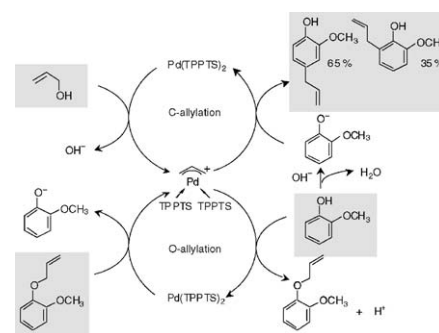
New kind of chiral dendritic BIPHEP ligands have been prepared and their applications in the Ru-catalyzed asymmetric hydrogenation of β -ketoesters were investigated. Ruthenium catalysts containing these dendrimer ligands were effective in the hydrogenation of β -ketoesters. It was found that the size of the dendritic wedges influenced the enantioselectivity significantly.

**Emile Kuntz, Abderrahmane Amgoune, Christine Lucas, Gregory Godard**

Journal of Molecular Catalysis A: Chemical 244 (2006) 124

Palladium TPPTS catalyst in water: C-allylation of phenol and guaiacol with allyl alcohol and novel isomerisation of allyl ethers of phenol and guaiacol

The palladium TPPTS catalyst specifically catalyses the C-allylation of guaiacol by allyl alcohol in basic aqueous medium, but also the isomerisation of its allyl ether into C-allylated compounds. The guaiacolate anion solvated by water is selectively C-allylated into eugenols by the cationic complex $[\pi\text{-allyl}]\text{palladium}(\text{TPPTS})_2^+$ generated through the easy heterolytic cleavage of allyl compounds on palladium(0).

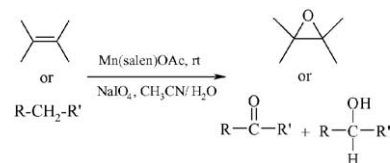


**Bahram Bahramian, Valiollah Mirkhani,
Shahram Tangestaninejad, Majid Moghadam**

Journal of Molecular Catalysis A: Chemical 244
(2006) 139

Catalytic epoxidation of olefins and hydroxylation of alkanes with sodium periodate by water-soluble manganese(III)salen

The catalytic activity of a water-soluble Mn(salen)OAc complex in the epoxidation of alkenes and hydroxylation of alkanes was studied in acetonitrile, at room temperature, using sodium periodate as an oxygen source.

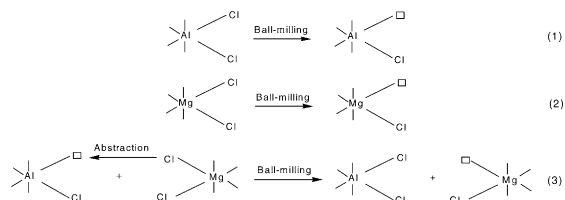


**W. Wang, L. Wang, T. Chen, T.X. Sun,
J.J. Wang, X. Chen**

Journal of Molecular Catalysis A: Chemical 244
(2006) 146

Low isotactic polypropylene synthesized with a MgCl₂/AlCl₃-supported Ziegler catalyst

A MgCl₂/AlCl₃-supported Ziegler–Natta catalyst is prepared and low isotactic polypropylene is synthesized using this catalyst in the paper. The results indicate that the polymerization activity of the MgCl₂/AlCl₃-supported Ziegler–Natta catalyst is much higher than that of the MgCl₂-supported Ziegler–Natta catalyst. And the attenuation curves of the polymerization rate of different Al/Ti molar ratios suggest the double metal active center is more stable than the single metal active center. Also the effects of the AlCl₃/MgCl₂ molar ratio, polymerization temperature and external electron donor on the polymerization activity and isotactic index of the products are studied in detail.

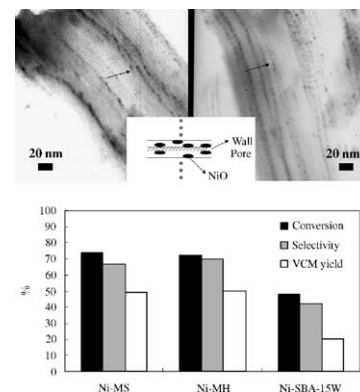


Taewook Kang, Younggeun Park, Jongheop Yi

Journal of Molecular Catalysis A: Chemical 244
(2006) 151

Facile synthesis and characterization of ordered mesostructured nickel catalysts

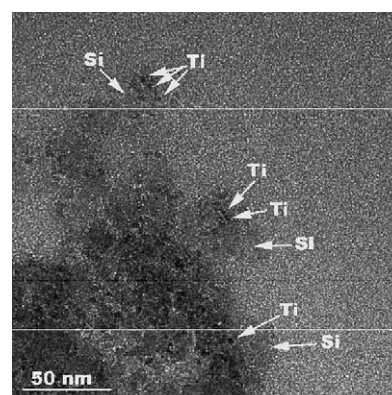
A facile and rapid synthesis using different acid sources including nickel salts and initial stage reaction temperatures for the preparation of mesostructured catalysts is described. Nickel precursors were added midway during the self-assembly of a block copolymer and a silica precursor, leading to one-step production of highly ordered mesoporous nickel catalysts. These mesostructured nickel catalysts were characterized and applied to the hydrodechlorination (HDC) of 1,1,2-trichloroethane.



**T. Yuranova, R. Mosteo, J. Bandara,
D. Laub, J. Kiwi**

Journal of Molecular Catalysis A: Chemical 244
(2006) 160

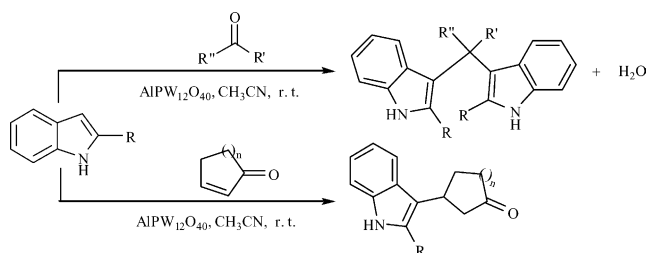
Self-cleaning cotton textiles surfaces modified by photoactive SiO₂/TiO₂ coating



**Habib Firouzabadi, Nasser Iranpoor,
Abbas Ali Jafari**

Journal of Molecular Catalysis A: Chemical 244
(2006) 168

Aluminumdodecatungstophosphate (AIPW₁₂O₄₀), a versatile and a highly water tolerant *green* Lewis acid catalyzes efficient preparation of indole derivatives

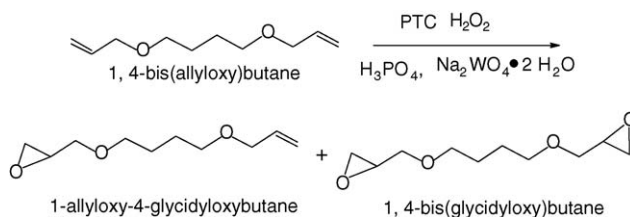


E. Kaczmarczyk, E. Janus, E. Milchert

Journal of Molecular Catalysis A: Chemical 244
(2006) 173

Epoxidation of 1,4-bis(allyloxy)butane by hydrogen peroxide using phase transfer catalysis

Epoxidation of 1,4-bis(allyloxy)butane (DiAB) to 1-allyloxy-4-glycidyloxybutane and 1,4-bis(glycidyloxy)butane by hydrogen peroxide under phase transfer catalysis and transition metal salts was investigated. The influence of temperature, reaction time, the type and amount of phase transfer catalyst, molar ratio of hydrogen peroxide to 1,4-bis(allyloxy)butane, the amount and molar ratio of H₃PO₄:Na₂WO₄·2H₂O were studied. The reaction proceeding in the process can be described by the following equations:

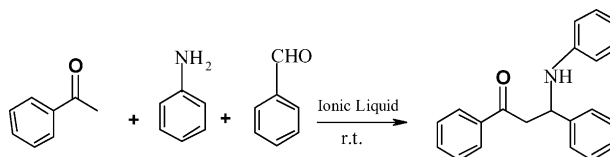


Suman Sahoo, Trissa Joseph, S.B. Halligudi

Journal of Molecular Catalysis A: Chemical 244
(2006) 179

Mannich reaction in Brønsted acidic ionic liquid: A facile synthesis of β-amino carbonyl compounds

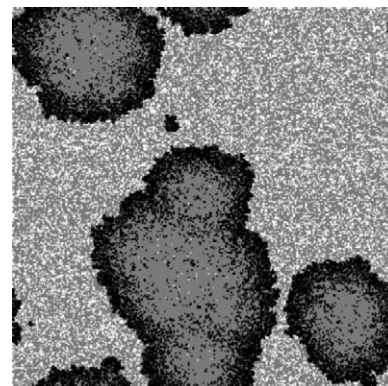
An efficient process for a simple and fast reaction of different aldehydes, ketones and amines (Mannich reaction) to afford corresponding β-amino carbonyl compounds is demonstrated. The reaction proceeded very fast with high yield of the desired Mannich base using catalytic amount of ionic liquid.



S.J. Alas, F. Rojas, I. Kornhauser, G. Zgrablich

Journal of Molecular Catalysis A: Chemical 244
(2006) 183

Dynamic Monte Carlo simulation of oscillations and pattern formation during the NO + CO reaction on the Pt(1 0 0) surface

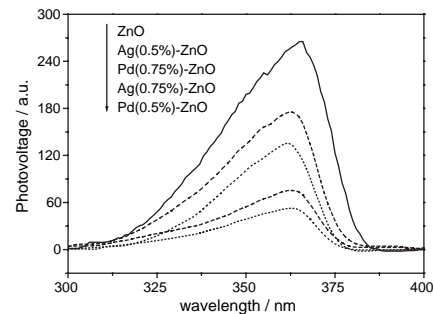


Jing Liqiang, Wang Dejun, Wang Baiqi, Li Shudan, Xin Baifu, Fu Honggang, Sun Jiazhong

Journal of Molecular Catalysis A: Chemical 244 (2006) 193

Effects of noble metal modification on surface oxygen composition, charge separation and photocatalytic activity of ZnO nanoparticles

The effects of noble metal modification on surface composition, photoinduced charge transfer and photocatalytic activity of ZnO nanoparticles are mainly investigated, and the comparative study of Ag and Pd modification was emphasized. The results showed that the increase in the content of surface hydroxyl oxygen and the separation rate of photoinduced charges resulted into the increase in the photocatalytic activity.

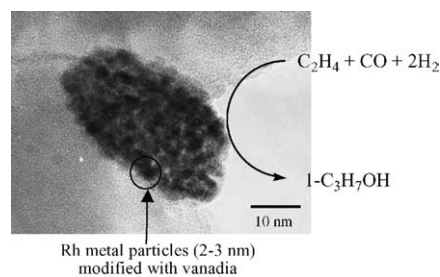


Takashi Yamagishi, Ippai Furikado, Shin-ichi Ito, Toshihiro Miyao, Shuichi Naito, Keiichi Tomishige, Kimio Kunimori

Journal of Molecular Catalysis A: Chemical 244 (2006) 201

Catalytic performance and characterization of RhVO₄/SiO₂ for hydroformylation and CO hydrogenation

Rh particles modified with vanadia were formed by the reduction of RhVO₄ mixed oxide, and these promoted alcohol formation in hydroformylation of ethylene and propylene, and CO hydrogenation. On V-Rh/SiO₂, the activation of hydrogen is not inhibited in the presence of CO and this property can be related to the promotion of alcohol formation.

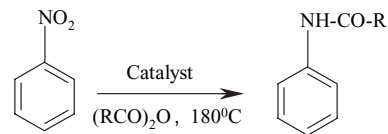


M. Lakshmi Kantam, K.V.S. Ranganath, M. Sateesh, B. Sreedhar, B.M. Choudary

Journal of Molecular Catalysis A: Chemical 244 (2006) 213

Reductive N-acylation of nitroarenes by Fe³⁺-montmorillonite

Reductive N-acylation of nitroarenes to anilides in moderate to good yields in the presence of carboxylic acid anhydrides using a recyclable heterogeneous catalyst, Fe³⁺-montmorillonite, prepared from inexpensive materials is achieved in a single pot.

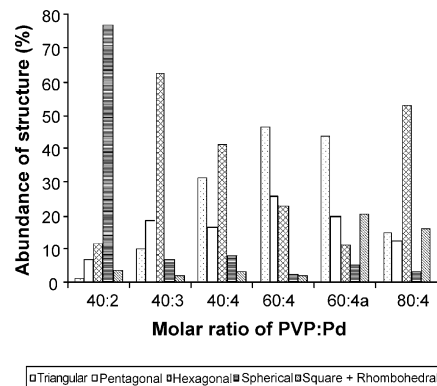


Hwaipeng Choo, Baolin He, Kong Yong Liew, Hanfan Liu, Jinlin Li

Journal of Molecular Catalysis A: Chemical 244 (2006) 217

Morphology and control of Pd nanoparticles

The different morphologies of PVP-stabilized Pd nanoparticles synthesized by chemical reduction of precursor salt in aqueous environment are described. The morphological distribution could be varied by changing the synthesis conditions.

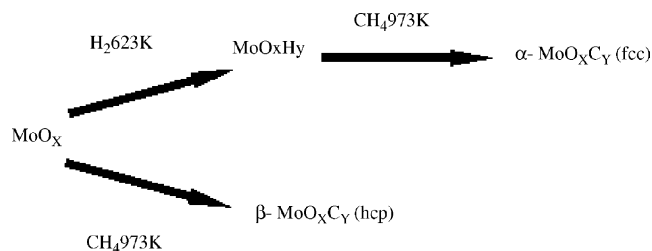


Hongmei Liu, Wenjie Shen, Xinhe Bao, Yide Xu

Journal of Molecular Catalysis A: Chemical 244 (2006) 229

Identification of Mo active species for methane dehydro-aromatization over Mo/HZSM-5 catalysts in the absence of oxygen: ^1H MAS NMR and EPR investigations

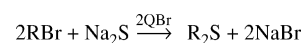
The Mo oxide species associated with the Brønsted acid sites of HZSM-5 zeolite can be partially reduced to the MoO_xC_y species during the induction period, which play a crucial role in methane dehydro-aromatization. Pre-reduction with H_2 at 623 K can enhance the topotactic transformation of the Mo specie from hexagonally close packed (hcp) structure into face centered cubic (fcc) structure, thus can improve greatly the catalytic activity and stability of the Mo/HZSM-5 catalyst.

**Maw-Ling Wang, Venugopal Rajendran**

Journal of Molecular Catalysis A: Chemical 244 (2006) 237

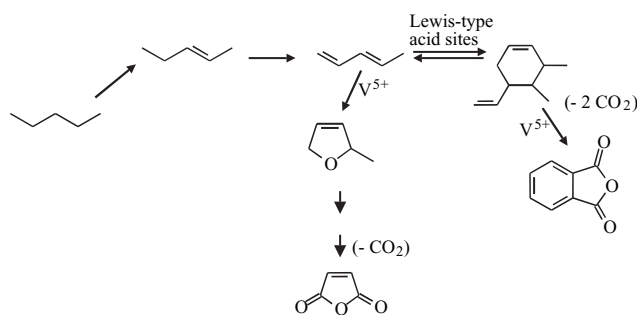
A kinetic study of thioether synthesis under influence of ultrasound assisted phase-transfer catalysis conditions

In this work, the catalyzed reaction of alkyl bromides and sodium sulfide to synthesize thioether by quaternary ammonium salts in a liquid-liquid two-phase medium was carried out. Kinetics of the reaction are investigated in detail.

**G. Bignardi, F. Cavani, C. Cortelli, T. De Lucia, F. Pierelli, F. Trifirò, G. Mazzoni, C. Fumagalli, T. Monti**

Journal of Molecular Catalysis A: Chemical 244 (2006) 244

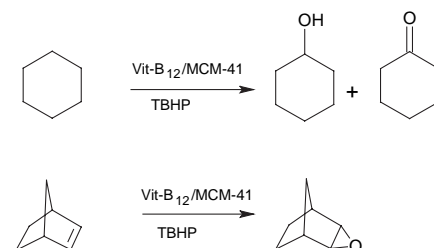
Influence of the oxidation state of vanadium on the reactivity of V/P/O₂ catalyst for the oxidation of *n*-pentane to maleic and phthalic anhydrides

**F. Farzaneh, J. Taghavi, R. Malakooti, M. Ghandi**

Journal of Molecular Catalysis A: Chemical 244 (2006) 252

Immobilized Vitamin B₁₂ within nanoreactors of MCM-41 as selective catalyst for oxidation of organic substrates

The immobilized Vitamin B₁₂ (Vit-B₁₂) within the nanoreactors of MCM-41 was characterized by X-ray powder diffraction (XRD), chemical analysis and nitrogen adsorption-desorption. It was found that Vit-B₁₂/MCM-41 selectively catalyzes the oxidation of norbornene or *trans*-2-hexene-1-ol and cyclohexane with *t*-butylhydroperoxide (TBHP) to the corresponding epoxides and a mixture of cyclohexanol and cyclohexanone, respectively.

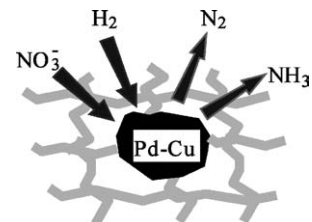


**Dana Gašparovičová, Milan Králik,
Milan Hronec, Andrea Biffis, Marco Zecca,
Benedetto Corain**

Journal of Molecular Catalysis A: Chemical 244 (2006) 258

Reduction of nitrates dissolved in water over palladium-copper catalysts supported on a strong cationic resin

Bimetallic Pd-Cu catalysts supported on cationic resin (DOWEX 1 × 4, gel type poly(styrene-co-divinylbenzene) with $-N(CH_3)_3^+Cl^-$ groups, particle size 100–200 mesh) were prepared and tested in the liquid-phase hydrogenation of nitrates in water. The characterisation by means of X-ray microprobe analysis (XRMA), X-ray powder diffraction (XRPD) and transmission electron microscopy (TEM) revealed the presence of palladium metal nanoclusters and copper compounds. The Pd-Cu/Dowex 1 × 4 catalysts proved the hypothesis of positive effect of higher mobility of anions in body of the swollen cationic resin.

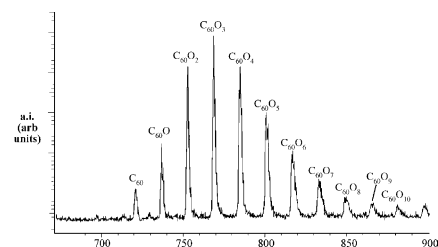


Doug Ogrin, Andrew R. Barron

Journal of Molecular Catalysis A: Chemical 244 (2006) 267

Highly oxygenated fullerenes by catalytic epoxidation of C_{60} and single walled carbon nanotubes with methyltrioxorhenium–hydrogen peroxide

Highly oxygenated fullerenes, $C_{60}O_n$ with $3 \leq n \leq 9$, have been prepared by the Lewis base enhanced catalytic oxidation of C_{60} with $ReMeO_3/H_2O_2$. Pyridine, pyrazole, and 2,2'-bipyridine decrease the activity of the catalyst, while 3-cyanopyridine or 4-bromopyrazole show significant enhancements. Epoxidation of single walled carbon nanotubes (SWNTs) is accomplished with $ReMeO_3/H_2O_2/4$ -bromopyrazole.

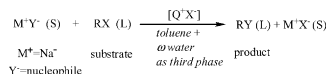
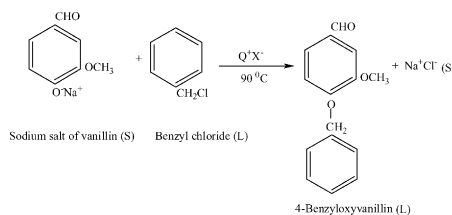


Ganapati D. Yadav, Sharad V. Lande

Journal of Molecular Catalysis A: Chemical 244 (2006) 271

Rate intensive and selective etherification of vanillin with benzyl chloride under solid–liquid phase transfer catalysis by aqueous omega phase

The rates of reaction are enhanced dramatically under solid–liquid PTC using trace amounts of water to get 100% selectivity to the ether.



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Synthesis of monoallyl guaiacol via allylation using HY zeolite

Monoallyl guaiacol such as eugenol, *o*-eugenol and chavibetol were synthesized by the allylation of guaiacol using zeolite HY. Among zeolites, HY gave maximum guaiacol conversion (46%) with 85% selectivity for monoallyl guaiacol under optimum reaction conditions.

